

REMARKS

The Applicants' below-named representative would like to thank Examiner Lorna Douyon for the helpful and courteous discussion of the issues in this application held on October 9, 2003. This discussion focused on the differences between the present invention and U.S. Patent No. 5,670,473 to *Scepanski* and JP 09217100 to *Ando et al.* The substance of this discussion is summarized and further expanded upon in the following remarks.

The invention relates to methods for manufacturing a molded detergent composition and to molded detergent compositions. The methods for manufacturing a molded detergent composition include steps of mixing a hydrated component and a hydratable component to provide a mixture, molding the mixture by extrusion to provide a molded detergent composition having a molded shape, and solidifying the molded detergent composition as a result of movement of water of hydration from the hydrated component to the hydratable component to provide the molded detergent composition as a solid under conditions of room temperature and atmospheric pressure and having a melting point greater than about 30°C. The step of solidifying takes about 1 minute to about 15 minutes. The hydrated component has a melting point below about 100°C and comprises a transhydration product of an anhydrous material and water of hydration, wherein the anhydrous material has a melting point greater than about 300°C. The hydratable component, if it includes any water at all, includes water at a level of less than about 2 wt.% based on the weight of the hydratable component. In addition, the hydratable component is a component that successfully competes with the hydrated component for at least portion of the water of hydration provided as part of the hydrated component. According to independent claim 1, the step of mixing occurs without heating. According to independent claims 27 and 31, the method for manufacturing a molded detergent composition occurs in the presence of either an enzyme or a solvent.

The molded detergent composition according to the invention is provided as a result of mixing and molding a composition by extrusion to compress the composition in a mold. Accordingly, the composition is shaped by extrusion. According to independent claim 16, the molded detergent composition is a result of mixing and molding a composition without heating. Independent claims 29 and 33 refer to molded detergent compositions that include an enzyme or a solvent.

Prior Art-Based Rejections

The outstanding Office Action includes 4 prior art-based rejections. The four prior art-based rejections are traversed and each rejection is addressed below.

Rejections over *Ando et al.*

Claims 1-4, 6, 8, 9, 16-20, 22, and 25 stand rejected under 35 U.S.C. §102(b) over *Ando et al.* This rejection is traversed.

It is pointed out that the English language translation of *Ando et al.* that is relied upon is the version provided by the United States Patent and Trademark Office. It is understood that this translation is a computer generated translation.

Ando et al. describe a detergent composition for dishwashing that contains hydrate compounds from an aggregate of solid particles with an average particle size of 0.5-2.0 mm and being a result of solidification without heating or pressure. See the English language abstract. It is understood from the English language translation that aggregates are formed having a diameter of 0.5-2.0 mm and the aggregates are allowed to solidify together to create a solid containing void spaces. See the English language translation at paragraphs 14 and 32. In addition, it is understood that the solidification takes place "in 1-5 hours for less than 24 hours." See the English language translation at paragraph 34.

Because *Ando et al.* describe solidifying in the absence of heating and pressure, the resulting composition is not a result of molding by extrusion to compress the composition in a mold as provided by the presently claimed invention. Because *Ando et al.* provide for solidification of aggregates having a diameter of 0.5-2.0 mm to create a solid containing void spaces, it is submitted that molding by extrusion would compress the composition and the resulting composition would not contain the void spaces desired by *Ando et al.* Accordingly, it is submitted that the molded detergent composition is clearly different from the composition described by *Ando et al.*

Furthermore, it is pointed out that new claims 35-40 characterize the molded detergent composition as pellets having an average diameter of about 0.5 cm to about 2.0 cm or blocks

having a diameter of about 2.0 cm to about 2 ft. Clearly, pellets and blocks produced by extrusion are not the types of products disclosed by *Ando et al.*

The method for manufacturing a molded detergent composition according to the presently claimed invention provides for solidifying in about 1 minute to about 15 minutes. Clearly, this feature is not disclosed by *Ando et al.* It is pointed out that *Ando et al.* describe solidification that takes hours.

It is recognized that *Ando et al.* mention extrusion in paragraph 35 of the English language translation. It is unclear from this disclosure by *Ando et al.* how the extruder can be used. Clearly, it is expected that if the extruder is used to compress the composition into or through a mold, then one would expect that the void spaces that are intended to be present in the solid would be eliminated. Furthermore, the composition would not be characterized as a result of "mixing uniformly and standing for the specified time to solidify naturally without heating or compressing" as disclosed by *Ando et al.* See the English language abstract.

In view of the above comments, it is clear that the claims are not anticipated by *Ando et al.* Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) is requested.

Claims 5, 7, 14, 15, 21, 23, 24, 26, and 31-34 stand rejected under 35 U.S.C. §103(a) over *Ando et al.* This rejection is traversed.

It is submitted that no reason has been provided in the outstanding Office Action for modifying *Ando et al.* to increase the solidification step so that the solidification takes about 1 minute to about 15 minutes according to the presently claimed invention. According to the English language abstract of *Ando et al.*, the aggregates are mixed uniformly and allowed to stand "for a specified time to solidify naturally without heating or compressing." See the English language abstract. According to the English language translation of paragraph 34, it appears that this time is on the order of hours.

It is submitted that no reason has been provided for modifying *Ando et al.* to provide a molded detergent composition prepared by extrusion to compress the composition in a mold according to the present invention. It is submitted that *Ando et al.* allows the aggregates having a diameter of about 0.5-2.0 mm to solidify together to create a solid containing void spaces. See

the English language translation at paragraphs 14 and 32. It is submitted that compressing the aggregates of *Ando et al.* in a mold would result in a composition lacking the void spaces, and such a composition goes against the teachings of *Ando et al.*

It is believed that *Ando et al.* teach away from the presently claimed invention, and would not have suggested the presently claimed invention. Furthermore, no sufficient reasons have been provided for modifying *Ando et al.* to achieve the presently claimed invention. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) is requested.

Rejection Over *Scepanski*

Claims 16-26, 29, 30, 33, and 34 stand rejected under 35 U.S.C. §103(a) over *Scepanski*. This rejection is traversed.

Scepanski fails to disclose or suggest a method for manufacturing a molded detergent composition that includes a step of molding by extrusion to provide a molded detergent composition having a molded shape, and fails to describe or suggest a molded detergent composition that is the result of mixing and molding by extrusion to compress the composition in a mold according to the presently claimed invention.

Scepanski describes a method for solidification where the solidification occurs after mixing and allowing the composition to cool. See *Scepanski* at column 3, lines 40-43 and column 6, lines 25-27. It is submitted that *Scepanski* fails to suggest molding by extruding to compress a composition into a mold to provide a desired molded shape according to the presently claimed invention.

The solidification mechanism of *Scepanski* is not entirely clear. It is believed that *Scepanski* forms a solid cleaning agent from hydrated forms of salts by heating and melting the hydrated forms of salts, and then allowing the composition to cool thereby allowing the salts to rehydrate and solidify. See *Scepanski* at column 3, lines 30-32 and lines 50-55. By providing the hydrated forms of salts as melts, it is submitted that the hydrated forms of salts are no longer hydrates. That is, by melting the hydrated forms of salts, the crystalline structure of the hydrated forms of salts disappears and the water of hydration becomes free water. In contrast, the present invention provides for solidification as a result of a competitive hydration reaction where water

of hydration moves from the hydrated component to the hydratable component. This type of mechanism is not present according to *Scepanski* because the solidification process of *Scepanski* begins with a composition that does not contain water of hydration since the hydrated forms of salts are melted.

In view of the above comments, it is submitted that the presently claimed invention would not have been obvious from *Scepanski*, and withdrawal of the rejection under 35 U.S.C. §103(a) is requested.

Rejection Over *Ando et al.* and *Scepanski*

Claims 10-13 and 27-30 stand rejected under 35 U.S.C. §103(a) over *Ando et al.* and *Scepanski*. This rejection is traversed.

It is submitted that *Ando et al.* fail to disclose or suggest the claimed invention for the reasons identified above. *Scepanski* fails to cure the defects identified above with respect to *Ando et al.* In particular, it is pointed out that *Scepanski* fails to disclose or suggest a method for manufacturing a molded detergent composition that includes a step of molding by extrusion to provide a molded detergent composition having a molded shape, and fails to describe or suggest a molded detergent composition that is the result of mixing and molding by extrusion to compress the composition in a mold according to the presently claimed invention. Furthermore, it is pointed out that *Ando et al.* specifically teach against using pressure. See the English language abstract of *Ando et al.* Accordingly, one having ordinary skill in the art would not have received a suggestion from *Scepanski* to utilize a process that involves extrusion because *Scepanski* does not describe a process that utilizes extrusion according to the presently claimed invention. Furthermore, it is submitted that modifying *Ando et al.* to include extrusion would destroy the teachings of *Ando et al.* by removing the void spaces that are created by *Ando et al.* According to *Ando et al.* the void spaces are created by allowing the aggregates to "solidify naturally without heating or compressing." See the English language abstract.

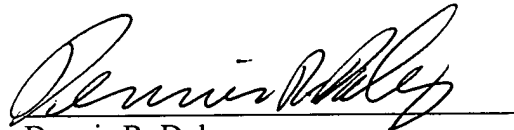
In view of the above comments, withdrawal of the rejection under 35 U.S.C. §103(a) over *Ando et al.* and *Scepanski* is requested.

It is believed that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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Date: October 17, 2003

A handwritten signature in black ink, appearing to read "Dennis R. Daley", written over a horizontal line.

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